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12/556,934 10 September 2009 (10.09.2009) US(71) Applicant (for all designated States except US): **QUALCOMM INCORPORATED** [US/US]; Attn: International IP Administration, 5775 Morehouse Drive, San Diego, California 92121 (US).

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(54) Title: SYSTEMS AND METHODS FOR LOCALIZED WIRELESS NOTIFICATION

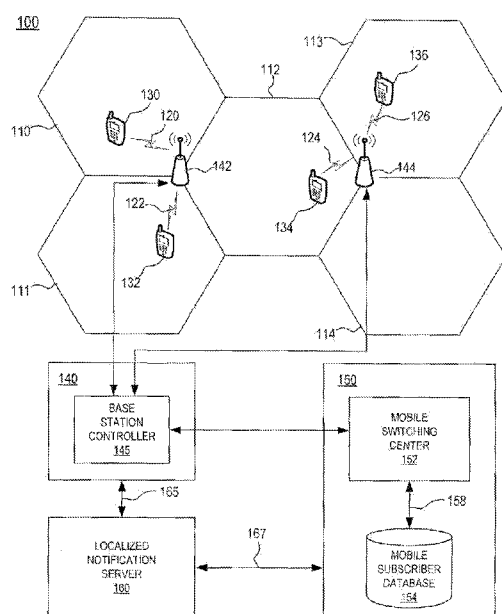


FIG. 1

(57) Abstract: Implementations relate to systems and methods for localized notification that provide localized information to one or more mobile devices in a wireless communication system that are located in one or more geographical regions. The wireless communication system includes a localized notification server that responds to geographically-targeted broadcast requests and localized service or information requests. The localized notification server localizes components of the wireless communication system into sets of localized components that provide wireless communication service to mobile devices in the specific geographical regions. In response to a request to broadcast to a target geographical region, the localized notification server identifies a set of localized components associated with the target geographical region. The localized notification server then broadcasts information to mobile devices actively serviced by the set of localized components.



GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. H04W4/02 H04L29/08
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04W H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, COMPENDEX, INSPEC, IBM-TDB, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/293240 A1 (DRENNAN MARK [US]) 20 December 2007 (2007-12-20) abstract paragraph [0001] - paragraph [0063] figures 1-7	1-39
X	US 2004/203562 A1 (KOLSRUD ARILD [US]) 14 October 2004 (2004-10-14) abstract paragraph [0001] - paragraph [0028] figures 1-4	1-39
X	WO 01/33892 A1 (ERICSSON INC [US]) 10 May 2001 (2001-05-10) abstract page 2, line 21 - page 13, line 6 figures 1-5	1-39
	----- -/-	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

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20/04/2011

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/048419

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-39

A system, apparatus, computer program product and method for performing localized notification, comprising:
determining one or more localized components that provide wireless communication service in a geographical region, wherein the localized components are selected from a plurality of components of at least one wireless communication system; and
associating the geographical region with the localized components.

2. claims: 40-61

A mobile device, apparatus, computer program product and method for performing localized notification, comprising:
wirelessly receiving, by a mobile device in a geographical region, localized information content from a localized component of a wireless communication system, wherein the localized component is associated with the geographical region; and
presenting, by the mobile device, the localized information content.

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2010/048419

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/058005 A1 (DOLEZAL ANTHONY J [US] ET AL) 16 March 2006 (2006-03-16) abstract paragraph [0001] - paragraph [0011] figures 1-3 -----	40-61
X	US 2007/123220 A1 (WEISER DOUGLAS [US] ET AL) 31 May 2007 (2007-05-31) abstract paragraph [0008] - paragraph [0288] figures 1-15 -----	40-61
X	US 2003/069002 A1 (HUNTER CHARLES ERIC [US] ET AL) 10 April 2003 (2003-04-10) abstract paragraph [0002] - paragraph [0156] figures 1-9c -----	40-61

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2010/048419

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